

CLAIMS

1. A system for dispensing food products, the system comprising:

a first dispenser defining a first output channel;

a first magazine for feeding a first set of rigid condiment packets to the first dispenser; and

a controller for sending a first control signal to the first dispenser, the first control signal instructing the first dispenser to dispense a first specified quantity of the first set of rigid condiment packets from the first output channel.

2. The system of Claim 1, wherein each of the rigid condiment packets comprises a flange having a flange outline,

wherein the first magazine defines a first guide channel having a first cross-sectional area, the first cross-sectional area being larger than and substantially congruent to the flange outline, and

wherein the first dispenser comprises:

a first fixed support extending into the first output channel for supporting a first portion of the flange of a selected condiment packet;

a first movable support; and

a first actuator for extending and retracting the first movable support into and from, respectively, the first output channel in response to the first control signal,

wherein when the first movable support is extended, the first movable support supports a second portion of the flange of the selected condiment packet.

3. The system of Claim 2, wherein the first actuator comprises a solenoid, and

wherein the controller comprises a microcontroller for providing an actuation signal to the solenoid in response to the first control signal.

4. The system of Claim 2, wherein the first guide channel is oriented to store the first set of condiment packets in a stack above the first output channel, and

wherein when the first movable support is extended, a support surface of the first movable support is lower than a support surface of the first fixed support.

5. The system of Claim 4, wherein the first magazine is removable from the system.

6. The system of Claim 5, wherein the first magazine comprises at least one wall for defining the first guide channel, and

wherein the at least one wall includes a transparent portion for viewing the first set of rigid condiment packets.

7. The system of Claim 4, further comprising an output chute below the first dispenser for guiding a dispensed condiment packet from the first dispenser to an output chamber, the output chute comprising at least one baffle for breaking the fall of the dispensed condiment packet.

8. The system of Claim 7, wherein the output chute further comprises a sensor for monitoring passage of the dispensed condiment packet into the output chamber.

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9. The system of Claim 1, further comprising:
  - a second dispenser defining a second output channel;
  - a second magazine for feeding a second set of rigid condiment packets to the second dispenser,
    - wherein the controller sends a second control signal to the second dispenser to instruct the second dispenser to dispense a second specified quantity of the second set of rigid condiment packets from the second output channel.
10. The system of Claim 9, further comprising a selection interface for receiving a selection input, wherein the controller sends the first control signal or the second control signal to the first dispenser or the second dispenser, respectively, based on the selection input.
11. The system of Claim 10, further comprising a payment interface for receiving payment, wherein the controller sends the first control signal or the second control signal to the first dispenser or the second dispenser, respectively, in response to the payment.
12. The system of Claim 11, further comprising:
  - a set of snack foods; and
  - a food dispensing mechanism for dispensing a serving from the set of snack foods in response to the payment and the selection input.
13. The system of Claim 12, wherein the set of snack foods consists of a single type of snack food,
  - wherein each of the first set of condiment packets contains a first condiment flavor, and

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wherein each of the second set of condiment packets contains a second condiment flavor, the second condiment flavor being different from the first condiment flavor.

14. The system of Claim 10, wherein the selection input is provided by a remote order entry terminal.

15. The system of Claim 1, wherein the magazine comprises means for pushing the first set of condiment packets towards the first dispenser.

16. A snack food vending machine comprising:  
a payment interface;  
a selection interface;  
means for storing a plurality of snack food items;  
means for storing a plurality of condiment packets;  
and

means for automatically dispensing a serving of the plurality of snack food items and at least one of the plurality of condiment packets in response to a payment at the payment interface and a selection input at the selection interface.

17. The snack food vending machine of Claim 16, wherein the plurality of condiment packets includes a plurality of condiment flavors, and

wherein the condiment flavor in the at least one of the plurality of condiment packets is based on the selection input.

18. The snack food vending machine of Claim 17, wherein the plurality of snack food items consists of a single snack food type.

19. The snack food vending machine of Claim 16, wherein the means for storing the plurality of condiment packets comprises a plurality of removable magazines,

wherein each of the plurality of magazines holds a set of condiment packets having a single condiment flavor.

20. An order fill system in a food dispensing environment comprising:

an order entry terminal for generating a control signal in response to a selection input;

an automated condiment dispensing system for dispensing a condiment packet filled with a condiment flavor in response to the control signal; and

a communications link for conveying the control signal to the automated condiment dispensing system.

21. The order fill system of Claim 20, wherein the condiment flavor is defined by the control signal.

22. The order fill system of Claim 20, wherein the automated condiment dispensing system comprises a condiment selection interface for specifying the condiment flavor.

23. The order fill system of Claim 20, wherein the automated condiment dispensing system comprises a sensor for generating a dispense signal when a tray is properly positioned in the automated condiment dispensing system, the dispense signal instructing the automated condiment dispensing system to dispense the condiment packet.

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24. The order fill system of Claim 20, wherein the automated condiment dispensing system comprises a plurality of removable magazines for storing a plurality of condiment packets.

25. The order fill system of Claim 24, wherein each of the plurality of removable magazines stores a single condiment flavor.